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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/637,110	08/08/2003	Paul Steve Chirgott	A01415	5061

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EXAMINER

LEE, RIP A

ART UNIT PAPER NUMBER

1713

DATE MAILED: 12/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/637,110

Applicant(s)

CHIRGOTT, PAUL STEVE

Examiner

Rip A. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 6-10 is/are rejected.
- 7) ☒ Claim(s) 2 and 5 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01/08/04, 04/08/04.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Double Patenting*

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 and 8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 3 of copending Application No. 10/637,735 (see U.S. 2004/0039105). Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following reasons.

Present claim 1 is drawn to a composition comprising a population of polymer particles comprising void-containing rubber portion(s) wherein the volumetric proportion of the voids

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ranges from 1-90 wt % and wherein the void containing rubber portion comprises from 20-90 wt % of the individual polymeric particles.

Claim 3 of the copending application is drawn to a polymeric composition comprising a MBS resin and at least one of items (a), (b), (c), and (d). In particular, item (a) is a population of polymer particles comprising void-containing rubber portion(s) wherein the volumetric proportion of the voids ranges from 1-90 wt % and wherein the void containing rubber portion comprises from 20-90 wt % of the individual polymeric particles.

One difference between the claims is the wording of the preamble. Whereas the present claim recites a [generic] composition, the copending application recites a polymer composition. In this case, the specific polymer composition is a subset of a generic, unspecified composition. The key difference between claims is that whereas present claim 1 requires a population of polymer particles, claim 3 of the copending application indicates that a population of polymer particles may be incorporated in the composition. Nonetheless, it would have been obvious to one having ordinary skill in the art to arrive at the subject matter of the present claims by using the population of polymer particles (item (a)) because the copending claims recites such an embodiment.

Present claim 8 recites a thermoplastic resin comprising a plastic resin component and an impact modifier component wherein the impact modifier component comprises a polymeric composition comprising a population of polymer particles comprising void-containing rubber portion(s) wherein the volumetric proportion of the voids ranges from 1-90 wt % and wherein the void containing rubber portion comprises from 20-90 wt % of the individual polymeric particles.

The difference between present claim 8 and claim 3 of the copending application is analogous to the difference between present claim 1 and claim 3 of the application, as described above. Here, present claim 8 recites a general thermoplastic composition whereas claim 3 of the copending application recites a specific thermoplastic, MBS resin. In this case, MBS is a species of the genus of thermoplastic resin. The principal difference between claims is that whereas claim 1 requires the presence of a population of polymer particles, claim 3 of the copending application indicates that a population of polymer particles may be incorporated in the composition. Nonetheless, it would have been obvious to one having ordinary skill in the art to arrive at the subject matter of the present claims by using the population of polymer particles (item (a)) because the copending claims recites such an embodiment.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

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6. Claims 1, 3, and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,498,206 to Mizuta *et al.*

The prior art of Mizuta *et al.* relates to resin compositions suitable as an impact modifier for thermoplastic resins. The composition comprises 100 pw of a graft copolymer containing a hollow rubber component and at least two additives selected from the group consisting of (i) 0.01-10 pw of a higher fatty acid soap, (ii) 0.1-10 pw of a crosslinked polymer, and (iii) 0.001-5 pw of a silicone oil (See claim 1 and abstract). The void volume of the hollow rubber component is 3-90 vol % (col. 3, line 40). The graft copolymer is prepared by polymerizing vinyl monomer in the presence of 30-90 wt % of hollow rubber component (col. 3, line 57). Items (b)(1) and (b)(2) of the claims is met because the silicone oil is an industrial processing oil, and the fatty acid soap is a processing aid. As such, the subject matter of claims 1 and 8 is anticipated entirely by the prior art.

7. Claims 1, 4, and 8 are also rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,498,206 to Mizuta *et al.*

The discussion of the disclosures of the prior art from paragraph 4 of this office action is incorporated here by reference. Mizuta *et al.* does not show the particle size distribution of the graft polymers, and therefore, it is silent with respect to the features outlined in item (3)(a)-(d) of the claims. However, one of ordinary skill in the art would have found it obvious that no reasonable basis exists to believe that the polymerization process of Mizuta *et al.* yields a monodisperse product, especially in light of the fact that there is an order of magnitude

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difference in acceptable particle sizes of particles of the invention (average particle size is from 50-500 nm; col. 4, line 17) and the variable cavity percentage (10-70 vol. %; col. 3, line 40).

Therefore, it would have been obvious to one having ordinary skill in the art to reasonably believe that the entire population of hollow particles contains unequal populations of particles containing different void volumes and particle sizes, as recited in (3)(a) and (3)(c). In view of this discussion, and since the PTO can not conduct experiments, the burden is shifted to the Applicants to establish an unobviousness difference. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). The subject matter of claim 4 is obvious over the teaching in Mizuta *et al.* that the average particle size of particles of the invention spans a range of 50-500 nm. Obviously, a diameter of 500 nm is at least 20 % greater than a diameter of 50 nm.

8. Claims 6 and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 978 539 to Tone *et al.*

The prior art of Tone *et al.* teaches a thermoplastic resin composition comprised of a thermoplastic resin and graft copolymer particles in a weight ratio of 2/98 to 90/10 (claim 1). The polymer particles contain 10-95 wt % of a hollow rubber portion and 5-90 wt % of a graft portion (claim 2). The void volume of the hollow rubber portion is 1-70 % (claim 3). Clearly, the subject matter of the present claims is anticipated by the prior art.



9. Claims 7 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 978 539 to Tone *et al.* in view of Mizuta *et al.*

The prior art of Tone *et al.* teaches a thermoplastic resin composition comprised of a thermoplastic resin and graft copolymer particles in a weight ratio of 2/98 to 90/10 (claim 1). The polymer particles contain 10-95 wt % of a hollow rubber portion and 5-90 wt % of a graft portion (claim 2). The void volume of the hollow rubber portion is 1-70 % (claim 3). Compositions of the invention also contain a lubricant such as an aliphatic hydrocarbon or an ester of a higher fatty acid or higher alcohol (page 7, line 3). However, the reference is silent with respect to an acceptable working amount of lubricant. Mizuta *et al.* shows that similar compositions may contain 0.01-10 pw of processing auxiliaries or 0.01-5 pw of a process oil. Regarding claims 1 and 6-10, it would have been obvious to one having ordinary skill in the art to use the amount prescribed in Mizuta *et al.* for the lubricants taught in Tone *et al.* and thereby arrive at the claimed invention. The combination is obvious because both references disclose variants of essentially the same subject matter.

10. Claims 1 and 3 are also rejected under 35 U.S.C. 103(a) as being unpatentable over EP 978 539 to Tone *et al.* in view of Mizuta *et al.*

Claim 1 is rejected for the same reasons set forth in the previous paragraph (*vide supra*) as it would have been obvious to one having ordinary skill in the art to use the working amount shown in Mizuta *et al.* for the lubricants taught in Tone *et al.* and thereby arrive at the claimed invention. One of ordinary skill in the art would have found it obvious to arrive at the subject matter of claim 3 because Mizuta *et al.* shows that the ester of a higher fatty acid or higher

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alcohol is stearyl stearate (page 17, line 4). This is an ester of a C<sub>18</sub> alcohol and C<sub>18</sub> carboxylic acid. Thus, it would have been obvious to one having ordinary skill in the art to use stearyl stearate and thereby arrive at the feature set forth in present claim 3.

11. Claims 2 and 5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim 2 is drawn to a particulate processing aid derived from at least one ethylenically unsaturated monomer. The prior art does not teach addition of such a processing aid. Given that a series of processing auxiliaries had been disclosed in the text, it would not have been obvious to one having ordinary skill in the art to replace said processing auxiliaries with the type recited in the present claims. Claim 5 is drawn to a rubber containing portion which includes blends of (a) an organosiloxane polymer and isobutylene polymer, (b) a vinyl polymer component and an isobutylene polymer component, and/or (c) an organosiloxane polymer component, a vinyl polymer component, and optionally, an isobutylene polymer component. The recited blends are not taught in the prior art, and it is deemed that one of ordinary skill in the art would not have found it obvious to arrive at the specific blends recited in the present claims.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (571)272-1104. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (571)272-1114. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <<http://pair-direct.uspto.gov>>. Should you have questions on the access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

A handwritten signature in black ink, appearing to read 'Rip A. Lee', with a stylized, cursive script.

Rip A. Lee

December 8, 2004